

Researcher in semiconductor optoelectronics/photronics, a permanent position at CEA-IRIG, Grenoble



The Laboratory for Quantum Photonics, Electronics, and Engineering (PHELIQS, <https://www.pheliqs.fr/en>), a joint research unit of CEA and the Université Grenoble Alpes, is seeking an outstanding early-career researcher in semiconductor optoelectronics/photronics. The opening is for a permanent, CEA research position.

PHELIQS is a fundamental research laboratory that gathers about 40 permanent researchers with activities in the fields of nanophysics and condensed matter physics. PHELIQS has recognized expertise in the development of optoelectronic materials, nanostructures and devices, which extends in particular to the fields of quantum photonics, innovative approaches for UV, visible and infrared optoelectronics, and silicon photonics. Within PHELIQS, the NPSC and SINAPS teams integrate an epitaxy platform that produces a variety of optoelectronic materials (SiGe and Ge alloys, III-nitrides, III-arsenides, II-selenides and II-tellurides). Furthermore, they are equipped for optical/optoelectronic characterization covering the entire spectral range from the THz region to the UV-C, and have access to the Nanocharacterization Platform and the Upstream Technological Platform of CEA for advanced structural/chemical characterization and device processing, respectively.

PHELIQS wishes to strengthen its activities in the field of optoelectronics/photronics. The candidate is expected to propose a new research program that builds on the equipment, platforms and know-how available in the host laboratories, adding the candidate's experience, in particular to bridge the gap between materials and devices. The foundations of her/his research project will be optoelectronic materials and devices with a focus in at least one of the following fields:

- Development of new methods to fabricate optoelectronic nanostructured materials and devices.
- Demonstration of new device concepts in optoelectronics, including integration of heterogeneous materials and technologies for cutting-edge photonics.
- Applications of the above in quantum technologies, communications, or energy conversion.

The successful candidate will work closely with the existing SINAPS and NPSC teams, conduct original research, and have the ability to establish and manage research collaborations with academic, industrial partners, and others teams within CEA. Strong interaction with the epitaxy teams within PHELIQS is highly encouraged. The candidate will supervise the research activity of students and post-docs. A strong team spirit is therefore required.

Located in the French Alps and surrounded by a stunning natural environment, the international city of Grenoble hosts a rich scientific ecosystem in the domain of semiconductor optoelectronics, including research organizations (CEA, CNRS), the Université Grenoble Alpes (UGA), Large Scale European Infrastructures (ESRF, ILL), and high-tech companies (Lynred, Aledia, Soitec, STMicroelectronics...).

CEA is a French public research organization that stands at the crossroad between fundamental and applied research. PHELIQS is one of the 10 laboratories of the Interdisciplinary Research Institute of Grenoble (CEA-IRIG), which belongs to the Fundamental Research Division of CEA and gathers 1200 employees working in the fields of physics, chemistry, biology, health, and cryotechnologies (<https://www.cea.fr/df/irig/english>).

Qualifications

Candidates must hold a PhD degree in physics, electrical engineering, materials engineering or related discipline, and have at least 2 years of post-doctoral research experience. They should have international experience in the field of optoelectronics/photronics, high-quality scholarly output at the international level, and a proven ability to carry out a research project independently. Candidates are expected to have a good ability to integrate and collaborate with current team members.

How to apply

Applicants shall send a cover letter indicating their interest and fit with the position, a detailed curriculum vitae including a description of their major achievements, a list of publications, and a research statement (2 pages max explaining current and future research interests) to pheliqs.photonics@cea.fr. In addition, they must arrange for three letters of recommendation to be sent directly to the same address. To ensure consideration, applications must be received by **May 10th, 2022**.

Selected candidates will be interviewed by a committee of experts in June/July 2022.

For more information about the position and the organization, please contact Eva Monroy (eva.monroy@cea.fr).